



Course Specification

DIPLOMA

Course Title: **Computing Fundamentals**

Course Code: **APDA1203**

Program: **Diploma in Data Analytics**

Department: **Diploma Department**

College: **The Applied College**

Institution: **Umm Al-Qura University**

Version: **1**

Last Revision Date: **05 May 2025**

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A. General information about the course:

1. Course Identification

1. Credit hours: (2)

2. Course type

A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (1st level - 1st year)

4. Course General Description:

Computer system: hardware, software, and people -- Input devices - Output devices - Secondary storage - Classification of computers - Data communications - Computer Software/Hardware - Categories of software - people and computers (programmer, system analyst and end-user) - Computer Security - Internet

5. Pre-requirements for this course (if any):

None

6. Co-requisites for this course (if any):

7. Course Main Objective(s):

This course aims to familiarize the student with computer systems (hardware and software) and develop skilled computer users with technical background and knowledge. The course introduces students to basic concepts of computer systems and their applications and gives an overview about networks, computer security, and data representation systems, in addition to an overview of the Internet, databases, big data, and the Internet of Things, with an explanation of best practices on the Internet.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	2	100%
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> Traditional classroom E-learning 		
4	Distance learning		



3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	2*15
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	
5.	Others (specify)	
Total		30

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Demonstrate understanding of core concepts in computer, database Internet, and Network	K1	- Lectures -Group discussion	Written exam
2.0	Skills			
2.1	Apply basic computer concepts to identify optimal uses of computers on Desktop, Networks, and Internet.	S1	- Lectures	Written exam
3.0	Values, autonomy, and responsibility			
3.1	Demonstrate ethical responsibility and awareness of legal and privacy considerations in data use.	V1	Lecture	Assignments, Quizzes, Exams

C. Course Content

No	List of Topics	Lecture
1.	<ul style="list-style-type: none"> - Introduction to computer types and components - Computer usage and its applications in our community life. - Definition of basic computer terms 	2
2.	<ul style="list-style-type: none"> - Computer Components (Hardware, Software, User) - History of Computers - Types of Computers 	2
3.	<ul style="list-style-type: none"> - Hardware Components (input, output, storage, RAM,...etc.) - Units of Measurement and System Unit 	2
4.	<ul style="list-style-type: none"> - Software Components - Types of Software (Operating Systems, Applications) - Generations Of Programming Languages - Compilers And Interpreters - Main Types of Applications 	2
5.	<ul style="list-style-type: none"> - Computer Networks - Types of Network Devices - Network Components - Communication Devices - Types of Networks (Local Area Network, Wide Area Network) - Network Topology - Network Features - Network Terminology 	4
6.	<ul style="list-style-type: none"> - Information Security and the Internet - Information Security Concepts (Confidentiality, Integrity, Availability) - Safe Practices for Protection - Challenges Facing Information Security - Cyber Threats - Intellectual Property - Hacking 	4
7.	<ul style="list-style-type: none"> - Uses of computers in everyday life (business, commercial) - An overview of databases and their terminology 	2
8.	<ul style="list-style-type: none"> - An overview of big data and its sources - An overview of artificial intelligence and its uses - An overview of the Internet of Things 	4

9.	<ul style="list-style-type: none"> - Cloud Computing - Cloud Computing Concepts - Cloud Account Management - Cloud Storage Applications (Google, Microsoft, Dropbox) 	2
10.	<ul style="list-style-type: none"> - Data Representation and Number Systems - Binary - Decimal - Hexadecimal - Conversion Between Number Systems 	4
11.	<ul style="list-style-type: none"> - Uses of the Internet in Our Daily Lives - Social Media - Digital Footprints - Personal and Professional Identity - Online Behavior 	2
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quizzes	4, 12	20 %
2.	Midterm Exam	8	30 %
3.	Practical skills	None	None
4	Final Exam	Final Week	50 %

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	1-IC3 Digital Literacy Global Standard 6 Certification Guide using Windows 10 & Microsoft 365 3rd Edition by CCI Learning, 2025 2- Introduction to Computers and the Internet,” Prof. Abdullah Abdulaziz Almosa, Seventh Edition
Supportive References	Explanation slides provided by the professor.
Electronic Materials	
Other Learning Materials	

2. Required Facilities and equipment



Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Traditional Classroom well equipped with at least 40 adequate seats.
Technology equipment (projector, smart board, software)	Projector
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect Course survey and students' feedback.
Effectiveness of Students	Faculty Members, Peer Reviewers	Direct Report on the satisfaction of exam standards.
Quality of learning resources	Faculty Member, Course Coordinators	Direct Learning resources evaluation survey.
The extent to which CLOs have been achieved	Faculty Members, Program Leaders	Direct Course reports.
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	Umm Al-Qura University Council
REFERENCE NO.	851281214463/193664
DATE	1447/01/20

